Documentation of Needs

What Is the Purpose of Documenting Needs?

The cost estimates included in the CWNS are associated with facilities eligible for funding under the SRF program. For each facility, the States are required to show both the need's existence and the cost necessary to satisfy that need. The purpose of documenting the needs and costs for each State is to ensure the national consistency and credibility of the data for inclusion in the CWNS database.

All needs documentation was required to meet certain basic criteria. Specifically, the documentation (1) *had to show that there was an existing need to prevent or abate a water quality or public health problem*, and (2) *had to be project specific*. For example, documentation describing a general, county-wide problem of septic system failures due to poor soils would be deemed unsuitable to document the needs of a particular town in that county. EPA reviewed all documentation submitted by the States to ensure that the documentation complied with these criteria.

What Levels of Documentation Were Accepted for Needs Justification?

States could use a wide variety of documentation to report needs. Table D-1 in Appendix D lists the 31 EPA-approved types of documentation for the 1996 CWNS and indicates whether they were acceptable for justification of need and/or cost. Generally, if a document was one of the approved document types, it was accepted for justification of need if it included sufficient details concerning the proposed project (i.e., a definition of the problem, a description of the solution to the problem, and cost estimates when appropriate).

EPA strongly encouraged States to submit any available documentation of needs and costs for SW and NPS program needs. Needs and costs that could not be documented to the extent required by the EPA standards are discussed later in the section entitled "What Was the Connection Between Documentation and the Separate State Estimates?"

What Were the Redocumentation Requirements?

A main objective of the 1996 CWNS is to improve the validity and accuracy of the needs data in the CWNS database. For this reason, States were required to redocument the larger needs that appeared in the 1992 CWNS that they still considered valid. The States and EPA decided that any need greater than $5 million (1996 dollar base) which was supported by documentation dated earlier than January 1, 1990, had to be redocumented for the 1996 CWNS.

How Did Documentation Requirements Differ for Small Communities?

It is difficult for some small communities to document needs and costs for projects because, in many cases, local governments do not have the resources required to develop the necessary detailed planning and engineering studies. For this reason, EPA established alternative, less extensive documentation requirements for facilities associated with small communities.

In general, alternative documentation for small communities required: a description of the proposed project; an explanation of why the project was necessary (e.g., public health or water quality problem); and a statement of how the project would benefit the community. Commonly, this information was submitted on a standardized survey form that required signatures from suitable community and State officials. The alternative documentation could also contain a preliminary cost estimate. However, if it did not, cost curves were used to estimate the need, as described in the next section.

How Were Needs Estimated if Supporting Documents Did Not Contain Cost Data?

Once a State adequately documented a need, EPA accepted it for purposes of the CWNS, regardless of whether a documented cost estimate was available. This allowed States to use a wider variety of documents for needs justification rather than being restricted only to those containing cost data. For example, NPDES permits and administrative orders were permissible to document a water quality need even though these typically include no cost information.

For documented needs without cost estimates, EPA-approved cost curves were available to calculate the needs for secondary treatment, advanced treatment, new collector sewers, new interceptor sewers, septic tank upgrades, and CSO abatement. A more extensive explanation of the CSO cost curves follows in the next section.

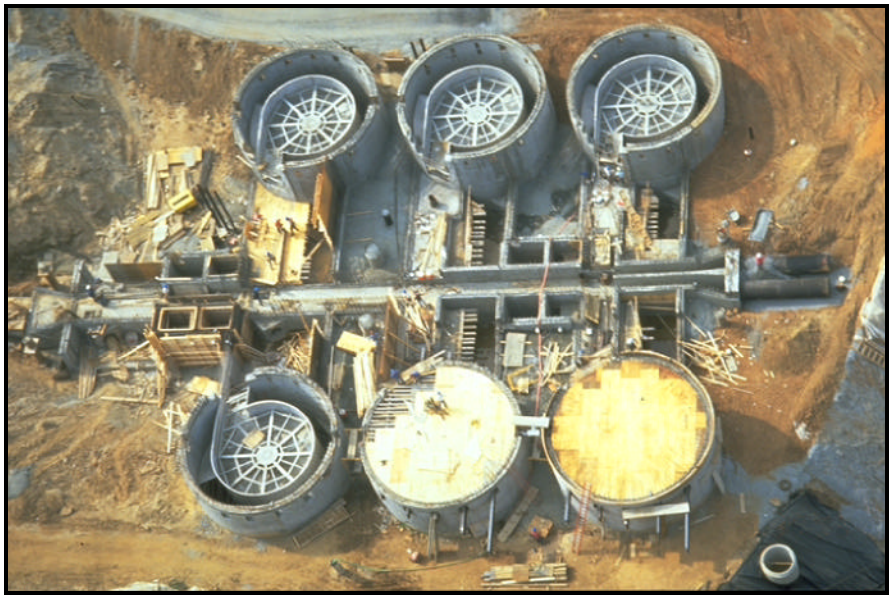
How Were the CSO Needs Calculated?

Currently, about 950 communities nationwide have combined sewer systems designed to carry both municipal wastewater and storm water. As point sources, CSOs are regulated under the CWA. In 1994, EPA concluded a negotiated dialogue with State, municipal, and environmental organizations that resulted in a CSO Control Policy. The CSO Control Policy offers a "presumptive" approach which allows a municipality three options to control their CSOs: (1) limiting, on average, the number of overflow events to between four and seven per year, (2) eliminating or capturing for a minimum of primary treatment no less than 85 percent by volume of the annual rainfall flow through the system, or (3) eliminating or reducing the mass of pollutants equivalent to the above 85 percent volume control. In addition, the presumptive approach establishes a minimum of primary clarification, solids and floatables disposal, and, if appropriate, disinfection.

As part of the 1996 CWNS redocumentation effort, EPA reviewed all facilities in the CWNS database that had documented Category V (CSO) needs or that were identified as CSO facilities. EPA then compared these facilities with the list of CSO facilities with State NPDES permits. In this way, the CWNS database was corrected to eliminate incorrectly identified CSOs and to reflect accurately CSO problems that had been solved.

Since the 1992 CWNS, the CSO communities have made significant progress in documenting their needs for CSO control to reduce the water quality and human health effects of CSOs and to comply with EPA's CSO Control Policy. At the same time, many CSO communities, particularly

Facility for controlling CSOs



smaller-sized communities, were unable to adequately document the cost for CSO controls. For the 1996 CWNS, EPA used a cost curve, based on the CSO model that was developed during the 1992 CWNS, to help provide these costs. Costs were estimated for all individual CSO facilities in communities with CSO needs that were unable to document fully the cost of meeting the CSO Control Policy objectives.

The cost curve methodology was based on the CSO Control Policy option that requires the elimination or capture for primary treatment of no less than 85 percent of the wet weather flow by volume. The cost curve uses rainfall patterns for each CSO community and a runoff coefficient to calculate flows resulting from storm events and to estimate the community-based flow requiring CSO control measures. The cost of the facilities required to provide additional treatment consisting of primary sedimentation, chlorine disinfection, and dechlorination was then estimated with the cost curves. This method is an improvement over the estimation method used for the 1992 CWNS which did not allow for developing costs on an individual facility basis.

How Were On-site Reviews Used in Support of the CWNS?

In years past, EPA would conduct on-site visits to States as part of the review and verification of the needs reported in the CWNS. EPA CWNS officials visited Texas and California as part of the 1996 CWNS quality assurance process. These officials performed a general review of how the data were collected and how the needs were documented for these two States. The review covered traditional needs, the SW and NPS categories of SRF-eligible projects, and facilities requiring redocumentation in the 1996 CWNS. For specific facilities, the two States provided EPA with documentation meeting approved criteria, such as capital improvement plans, facility plans, and State priority lists.

During these on-site reviews, EPA met with State CWNS coordinators to examine and discuss the documentation Texas and California submitted to support their needs, particularly documentation that demonstrated needs to prevent or abate a water quality or public health problem. These on-site reviews gave the State CWNS coordinators the opportunity to discuss details of this CWNS in depth, and provided the EPA officials a better understanding of where States needed assistance in documenting needs.

Both States have substantial needs and had large redocumentation requirements targeted in the 1996 CWNS clean-up effort. Some facilities required additional information and the EPA officials described the documentation needed to meet the redocumentation criteria. EPA officials also met with each of the State's NPS officials and discussed the documentation methods used to support their NPS needs.

Finally, the EPA officials visited a major wastewater treatment facility in each of the two States. The majority of both facilities visited were constructed with Federal grant and SRF loan dollars, and have had documented needs reported since the first survey in 1973. Both facilities have documented needs in the 1996 CWNS to serve continued growth. In California, EPA visited the Sacramento Regional County Sanitation District (SRCSD). This facility is located on a 900-acre site, and has an average flow of 180 mgd and a peak flow of 400 mgd. This activated sludge facility reclaims water from the treated wastewater for non-potable irrigation use on golf courses and parks. SRCSD was formed in 1973, replacing 17 treatment facilities, and currently serves 1 million residents across 220 square miles.

In Texas, EPA officials visited the Walnut Creek Wastewater Treatment facility owned by and serving the City of Austin. This facility was constructed in 1973 for a total cost of $57 million, of which $31 million was provided by construction grant funds. It is unique in that it was one of the first facilities to be constructed with all of its process components underground. The Walnut Creek facility now serves 240,000 people, has an average flow capacity of 60 mgd, and treats its wastewater to advanced treatment standards.

What Was the Connection Between Documentation and the Separate State Estimates?

When EPA determined that State documentation was at variance with the EPA-defined criteria for needs documentation, the needs were reported as SSEs. Additionally, EPA allowed States to submit separate estimates for needs that they believe are valid, but are not supported by documents meeting EPA's criteria. These needs estimates are not reported as CWNS needs, but as SSEs. States are permitted to report any needs estimates they feel were justified in the CWNS SSEs without EPA review.